A. CLASSIFICATION OF SUBJECT MATTER IPC 7 H04B1/69 According to International Patent Classification (IPC) or to both national classification and IPC B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 HO4B Documentation searched other than minimum documentation to the extent that such documents are included. In the fields searched Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal C. DOCUMENTS CONSIDERED TO BE RELEVANT Relevant to claim No. Citation of document, with indication, where appropriate, of the relevant passages Category ° 1 - 16WIN M Z ET AL: "ULTRA-WIDE BANDWIDTH Α TIME-HOPPING SPREAD-SPECTRUM IMPULSE RADIO FORWIRELESS MULTIPLE-ACCESS COMMUNICATIONS" April 2000 (2000-04), IEEE TRANSACTIONS ON COMMUNICATIONS, IEEE INC. NEW YORK, US, PAGE(S) 679-691 , XP000932191 ISSN: 0090-6778 the whole document SABERINIA E ET AL: "Multi-user UWB-OFDM 1 - 16Α communications" 28 August 2003 (2003-08-28), , PAGE(S) 127-130 , XP010661189 the whole document Patent family members are listed in annex. Further documents are listed in the continuation of box C. Special categories of cited documents: "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the *A* document defining the general state of the art which is not considered to be of particular relevance invention *E* earlier document but published on or after the international "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such docu-"O" document referring to an oral disclosure, use, exhibition or other means ments, such combination being obvious to a person skilled in the art. *P* document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of mailing of the international search report Date of the actual completion of the international search 15 December 2004 25/01/2005 Name and mailing address of the ISA Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel (+31-70) 340-2040, Tx. 31 651 epo nl, Ricciardi, M Fax: (+31-70) 340-3016

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